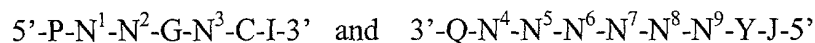


CLAIMS:

1. A compound comprising nucleotide sequences:-

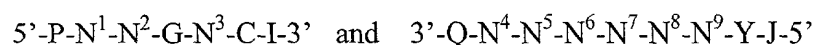


wherein

- 5        - P and Q are any two nucleotides that can form a Watson-Crick base pair,
- I and J are any two nucleotides that can form a base pair,
- $N^1$  and  $N^4$  are not both C,
- when  $N^2$  is A,  $N^7$  is not G,
- $N^9$  can only be U if  $N^3$  is A, and
- 10       - when  $N^3$  is G,  $N^9$  is A;

and said sequences can anneal to each other, and said compound comprises 200 or fewer nucleotides.

2. A compound comprising nucleotide sequences:-



15       wherein

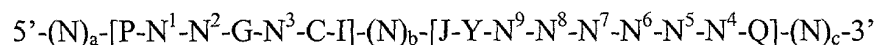
- P and Q are any two nucleotides that can form a Watson-Crick base pair,
- I and J are any two nucleotides that can form a base pair,
- $N^1$  and  $N^4$  are not both C,
- when  $N^2$  is A,  $N^7$  is not G,
- 20       -  $N^9$  can only be U if  $N^3$  is A, and

- when N<sup>3</sup> is G, N<sup>9</sup> is A;

and said sequences can anneal to each other, and said compound is not a complete HCV genome or fragment thereof.

3. The compound of claim 1 or 2 wherein the 3' end of the sequence 5'-P-N<sup>1</sup>-N<sup>2</sup>-G-N<sup>3</sup>-C-I-3' and the 5' end of the sequence 3'-Q-N<sup>4</sup>-N<sup>5</sup>-N<sup>6</sup>-N<sup>7</sup>-N<sup>8</sup>-N<sup>9</sup>-Y-J-5' are joined by a linker which allows said sequences to anneal to each other.

4. The compound of claim 3 comprising the sequence



wherein N may or may not be identical and is any nucleotide,

a is zero or an integer from 1 to 100,

b is an integer from 3 to 100, and

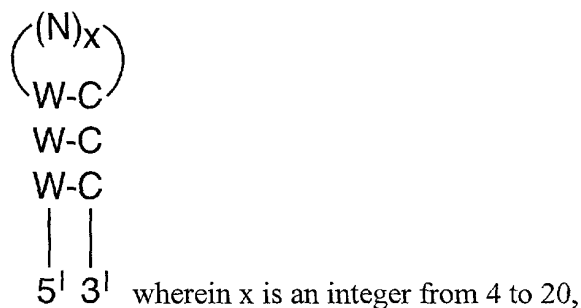
c is zero or an integer from 1 to 100, and

said linker is -(N)<sub>b</sub>-.

5. The compound of claim 4 wherein linker -(N)<sub>b</sub>- is a stabilising sequence.

6. The compound of claim 4 wherein said linker -(N)<sub>b</sub>- comprises a loop.

7. The compound of claim 6 wherein said linker -(N)<sub>b</sub>- comprises the structure:



and wherein W-C is a Watson-Crick base Pair, and each W-C may or may not be identical.

8. A compound comprising a first nucleic acid strand comprising the sequence 5'-P-N<sup>1</sup>-N<sup>2</sup>-G-N<sup>3</sup>-C-I-3' annealed to a second nucleic acid strand comprising the sequence 3'-Q-N<sup>4</sup>-N<sup>5</sup>-N<sup>6</sup>-N<sup>7</sup>-N<sup>8</sup>-N<sup>9</sup>-Y-J-5', wherein

- (a) P and Q are any two nucleotides that can form a Watson-Crick base pair,
- (b) I and J are any two nucleotides that can form a base pair,
- (c) N<sup>1</sup> and N<sup>4</sup> are not both C,
- (d) when N<sup>2</sup> is A, N<sup>7</sup> is not G,
- (e) N<sup>9</sup> can only be U if N<sup>3</sup> is A, and
- (f) when N<sup>3</sup> is G, N<sup>9</sup> is A.

9. The compound of claim 8 wherein I and J form a Watson-Crick base pair.

10. A compound comprising a first nucleic acid strand comprising the sequence 5'(N)<sub>a</sub>-P-N<sup>1</sup>-N<sup>2</sup>-G-N<sup>3</sup>-C-I-(N)<sub>b1</sub>-3' annealed to a second nucleic acid strand comprising the sequence 3'-(N)<sub>c</sub>-Q-N<sup>4</sup>-N<sup>5</sup>-N<sup>6</sup>-N<sup>7</sup>-N<sup>8</sup>-N<sup>9</sup>-Y-J-(N)<sub>b2</sub>-5', wherein

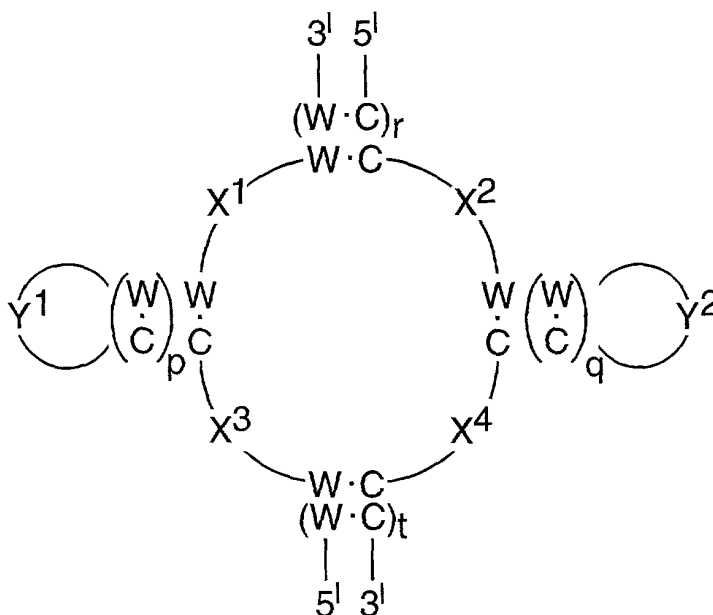
a is zero or an integer from 1 to 100,

b<sup>1</sup> is zero or an integer from 1 to 100,

b<sup>2</sup> is zero or an integer from 1 to 100, and

c is zero or an integer from 1 to 100.

11. The compound of claim 10 wherein the combination of  $(N)_{b1}$  and  $(N)_{b2}$  comprise a stabilising group, or  $(N)_{b1}$  and  $(N)_{b2}$  each, independently comprise a stabilising group .
12. The compound of claim 10 or 11 wherein  $-(N)_{b1}-$  and  $(N)_{b2}$  can anneal to each other.
- 5 13. The compound of claim 4 wherein the combination of  $-(N)_a-$  and  $-(N)_c-$  comprise a stabilising group, or  $-(N)_a-$  and  $-(N)_c-$  each, independently comprise a stabilising group.
14. The compound of claims 10 wherein the combination of  $-(N)_a-$  and  $-(N)_c-$  comprise a stabilising group, or  $-(N)_a-$  and  $-(N)_c-$  each, independently comprise a stabilising group.
15. The compound of claims 4 wherein  $-(N)_a-$  and  $-(N)_c-$  can anneal to each other.
- 10 16. The compound of claim 10 wherein  $-(N)_a-$  and  $-(N)_c-$  can anneal to each other.
17. The compound of claim 13 wherein  $-(N)_a-$  and  $-(N)_c-$  are capable of forming a structure comprising:



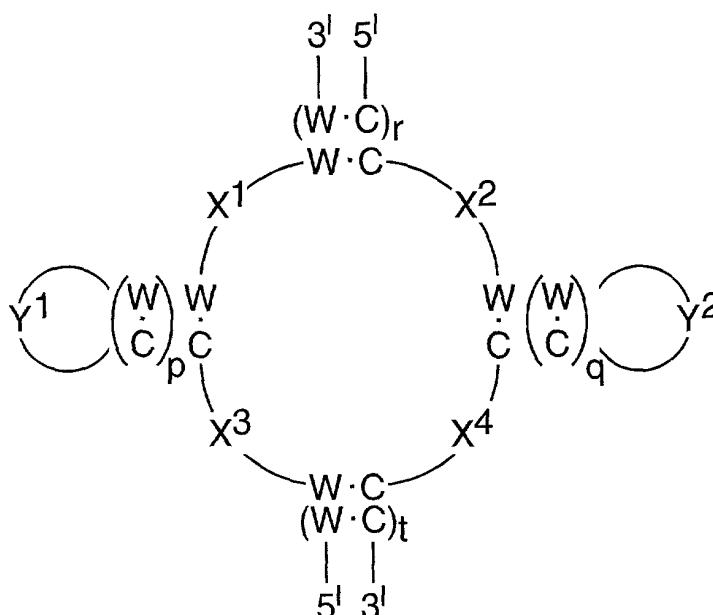
wherein each  $W \cdot C$  may or may not be identical and is a Watson-Crick base pair,

$X^1$ ,  $X^2$ ,  $X^3$  and  $X^4$  may or may not be identical and each, independently comprise from zero to four nucleotides,

$Y^1$  and  $Y^2$  may or may not be identical and each, independently comprise from three to ten nucleotides, and

5 p, q, r and t may or may not be identical and each, independently comprise an integer from zero to ten.

18. The compound of claim 14 wherein  $-(N)_a-$  and  $-(N)_c-$  are capable of forming a structure comprising:



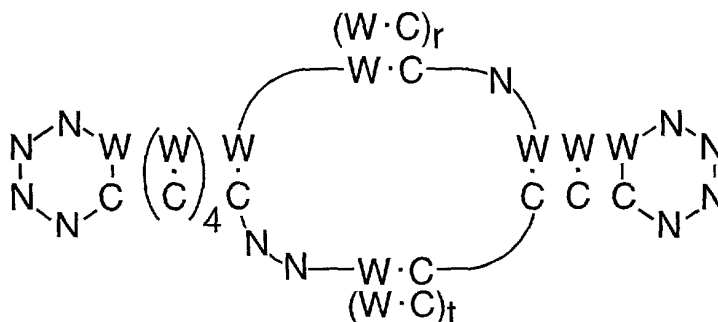
10 wherein each  $W \cdot C$  may or may not be identical and is a Watson-Crick base pair,

$X^1$ ,  $X^2$ ,  $X^3$  and  $X^4$  may or may not be identical and each, independently comprise from zero to four nucleotides,

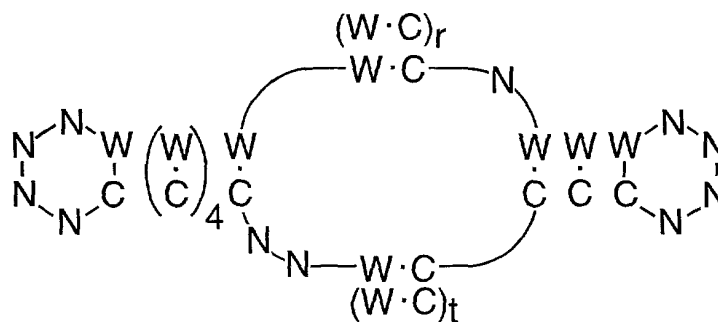
$Y^1$  and  $Y^2$  may or may not be identical and each, independently comprise from three to ten nucleotides, and

15 p, q, r and t may or may not be identical and each, independently comprise an integer from zero to ten.

19. The compound of claim 13 wherein  $-(N)_a-$  and  $-(N)_c-$  are capable of forming a structure comprising:



20. The compound of claim 14 wherein  $-(N)_a-$  and  $-(N)_c-$  are capable of forming a structure comprising:



21. The compound of claim 1, 2, 8 or 10, wherein P is a purine; Q is a pyrimidine; I is a pyrimidine; J is a purine;  $N^1$  is A, G or U;  $N^2$  is A, C or U;  $N^3$  is A;  $N^4$  is a purine;  $N^5$  is U;  $N^6$  is a purine;  $N^7$  is A, G or U;  $N^8$  is C;  $N^9$  is U; and Y is C.

22. The compound of claim 1, 2, 8 or 10 further comprising modified nucleotide bases and/or modified sugars and/or modified linkages.

23. An assay, comprising the steps of (a) incubating a test molecule with the compound of claim 1, 2, 8 or 10, and (b) detecting the formation of a binding complex comprising said test molecule and said compound.

24. An assay comprising the steps of (a) incubating a test molecule with the compound of claim 1, 2, 8 or 10, and a ligand that binds specifically to said compound, and (b) determining the amount of a complex comprising said compound and said ligand.

25. An assay comprising the steps of: (a) contacting a test molecule with a pair of indicator molecules comprising (i) a ligand that is a labelled reporter and (ii) the compound of claim 1, 2, 8 or 10, wherein each member of said pair of indicator molecules is independently labelled with a complementary acceptor or donor group, said pair of indicator molecules binds specifically to each other in an orientation that permits the donor group to come into sufficient proximity to the acceptor group to permit fluorescent resonance energy transfer and/or quenching to take place; and (b) measuring the fluorescence of said compound and/or said ligand in the presence of the test molecule and, (c) comparing this value to the fluorescence of at least one standard.

26. An assay according to claim 23, wherein the assay is a screening assay to detect potential HCV antiviral molecules.

27. An assay according to claim 24, wherein the assay is a screening assay to detect potential HCV antiviral molecules.

28. An assay according to claim 25, wherein the assay is a screening assay to detect potential HCV antiviral molecules.

29. An assay according to claim 23, wherein said test molecule is an HCV antiviral molecule.

30. An assay according to claim 24, wherein said test molecule is an HCV antiviral molecule.

31. An assay according to claim 25, wherein said test molecule is an HCV antiviral molecule.

32. A kit for determining whether a test molecule binds specifically to the compound of claim 1, 2, 8 or 10, said kit comprising (a) the compound of claim 1, 2, 8 or 10 and (b) a ligand that binds specifically to said compound, wherein either or both said ligand and said compound are labelled.

33. A kit comprising (a) the compound of claim 1, 2, 8 or 10 labelled with a donor group or an acceptor group and (b) a ligand reporter labelled with a complementary acceptor or donor group, wherein said ligand reporter and said compound bind specifically to each other in an orientation that permits the donor group to come into sufficient proximity to the acceptor group to permit fluorescent resonance energy transfer and/or quenching.
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Patent Application No. 2016/0123456